

REMARKS

Claims 1-20 remain in this application as originally submitted. Reconsideration and review of the application is respectfully requested.

Before addressing the merits of the rejections based on the prior art, a brief description of the present invention is provided. The present invention is directed to an apparatus for scanning radio frequency identification (RFID) data from one or more RFID tags or transponders. An RFID tag generally includes a semiconductor memory in which digital information may be stored, such as an electrically erasable, programmable read-only memory (EEPROM) or similar electronic memory device. An RFID interrogator or reader may recover the digital information stored in the RFID tag using modulated radio frequency (RF) signals. In an exemplary embodiment of the present invention, this communication technique may utilize "backscatter modulation," by which an RFID transponder transmits stored data by reflecting varying amounts of an electromagnetic field provided by the RFID interrogator by modulating the antenna matching impedance of the transponder. The RFID tags may either extract power from the electromagnetic field provided by the interrogator, or include an internal power source (e.g., battery).

Because RFID tags using backscatter modulation do not include a radio transceiver, they can be manufactured in very small, lightweight and hence inexpensive units. RFID transponders that extract power from the interrogating field are particularly cost effective since they lack a power source. In view of these advantages, RFID transponders can be used in applications in which it is desirable to track information regarding an object, including inventory management, retailing, shipping and distribution, vehicle toll collection, and many others.

The apparatus of the present invention includes a hands-free RFID reader that enables an operator to read or identify items having RFID tags without using the hands. More particularly, the apparatus comprises a housing containing at least a portion of an

RFID scanner. The housing can be affixed to a portion of an operator's body, such as a hand or wrist, using a strap or other like attachment. The RFID scanner further includes an antenna, a radio transmitter/receiver coupled to the antenna, and a processor adapted to control operation of the radio transmitter/receiver. In an exemplary embodiment of the invention, the housing contains the antenna, and the radio transmitter/receiver and processor are disposed externally of the housing. In another exemplary embodiment of the invention, the housing contains the antenna, the radio transmitter/receiver, and the processor. The housing may further contain a power source adapted to provide power for the RFID scanner. The RFID scanner may also be adapted to communicate the RFID data to an external system, such as via a wireless or infrared connection. Accordingly, the present invention provides a hands-free system for reading RFID tags.

The Examiner has rejected Claims 1, 5-7, 10 and 14-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,036,093 to Schultz. The Examiner has also rejected Claims 2-4 and 11-13 under 35 U.S.C. §103(a) as being unpatentable over Schultz. The Examiner has further rejected Claims 8-9, 17-18 and 19-20 under §103(a) as being unpatentable over Schultz in view of U.S. Patent No. 5,610,387 to Bard et al. These rejections are respectfully traversed.

Schultz discloses a portable or hand held data terminal which includes a modular scanner for reading bar codes. Col. 1, lines 35-37; Col. 7, lines 10-13. Schultz discloses that the scanner (16 and 78) may be a laser or CCD (charge-coupled device) scanner. Col. 4, lines 49-51. Schultz discloses that the scanning module (16) may also include a radio frequency antenna (53). Col. 5, lines 64-67; Fig. 16. Schultz discloses that data terminal (70) could include a integrated or modular scanner, an internal low powered radio transceiver and battery. Col. 6, lines 16-18. Schultz does not disclose or suggest that the radio frequency antenna (53) may be used to communicate with RFID tags. Instead, the radio frequency antenna (53) is merely used to allow communication with a base station. See Col. 5, lines 60-67; Figs. 12-16. As a result, Schultz does not

disclose or suggest that the scanner (16 and 78) is operable to read data from an RFID tag or otherwise retrieve data from a transponder utilizing modulated radio frequency (RF) signals (e.g., backscatter modulation). Accordingly, unlike the present application, Schultz does not disclose or suggest an RFID reader or scanner. See page 2, line 25 – page 3, line 12 of the present application.

In particular, with respect to Claim 1, Schultz does not disclose or suggest “[a]n apparatus **for scanning radio frequency identification (RFID) data** from at least one RFID tag, comprising . . . a housing containing at least a portion of an **RFID scanner** . . .” With respect to Claim 10, Schultz does not disclose or suggest “[a] system for **collecting radio frequency identification (RFID) data (RFID) data**, comprising . . . at least a portion of a **RFID scanner** . . . at least one **RFID tag** . . . wherein the RFID scanner is adapted to scan said at least one RFID tag . . .”

Bard does not cure the deficiencies of Schultz. Bard is directed to an optical scanning system for reading indicia of differing light reflectivity, such as bar codes or matrix arrays. Col. 5, lines 2-4. The system includes a finger mountable optical scan module (200), a wrist mounted peripheral module (204) to receive a signal from the scan module, and a second peripheral module with a radio frequency receiver to transmit data to a base station. Col. 5, lines 26-27, 42-56. Accordingly, unlike the present invention, Bard also fails to disclose or suggest an RFID reader or scanner. See page 2, line 25 – page 3, line 12 of the present application.


In particular, with respect to Claim 1, the combination of Schultz and Bard does not disclose or suggest “[a]n apparatus **for scanning radio frequency identification (RFID) data** from at least one RFID tag, comprising . . . a housing containing at least a portion of an **RFID scanner** . . .” With respect to Claim 10, the combination of Schultz and Bard also fails to disclose or suggest “[a] system for **collecting radio frequency identification (RFID) data (RFID) data**, comprising . . . at least a portion of a **RFID scanner** . . . at least one **RFID tag** . . . wherein the RFID scanner is adapted to scan said at least one RFID tag . . .”

Schultz and Bard do not disclose or suggest all of the limitations of independent Claims 1 and 10. As a result, neither Schultz nor Bard form the proper basis for either a §102(b) or §103(a) rejection. Accordingly, the Applicants respectfully request the withdrawal of the rejections based on these references. Claims 2-9 depend either directly or indirectly on Claim 1. Claims 11-20 depend either directly or indirectly on Claim 10. The dependent claims should be allowed for at least the reason that they depend on an allowable base claim (i.e., either Claim 1 or Claim 10).

In view of the foregoing, the Applicants respectfully submit that Claims 1-20 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. To the extent it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a one-month extension of time, extending to July 18, 2003, the period for response to the Office Action dated March 18, 2003. The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



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